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EXAMINER

MAI, TAN V

ART UNIT

PAPER NUMBER

2193

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1-14 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Rejection grounds continue to be those set forth in the previous office action (Paper dated 11/23/07, paragraph 3).

3. Applicants' arguments filed on 3/18/08 have been fully considered but they are not persuasive.

Applicants, in their remarks, argue that:

“[c]laim 1 has been amended to claim ‘computing the recurrence relation using the combined  $x^{m_i}$  polynomial coefficient terms in the single function  $GF(2^m)$  multiplication operation to produce a  $GF(2^m)$  result; and storing the  $GF(2^m)$  result in memory in a computer readable form’. Emphasis added. Claim 4 has been amended to claim ‘computing the recurrence relation using the combined  $x^{m_i}$  polynomial coefficient terms in the single function -  $GF(2^m)$  multiplication operation thereby calculating m by m bits for the  $GF(2^m)$  multiplication function to produce an m bit  $GF(2^m)$  result; and storing the m bit  $GF(2^m)$  result in memory in a computer readable form’. Emphasis added. Claim 7 has been amended to claim ‘a logic device producing  $A \oplus B \oplus Y(i-1)j-1$  as result  $Y(i)j$  to be utilized in one or more GF multiplication circuit cells or stored in a processor accessible storage unit’. Emphasis added. Claims 1, 4, and 7 as amended claim a concrete, useful, and tangible result.”

With respect to the arguments, the examiner carefully reviews Applicant's specification and claimed invention. It is noted that applicants haven't pointed out how/why the claim recite “statutory subject matter”, i.e., produces a **useful, concrete, and tangible result**. If the claim as a whole is reasonably interpreted as just solving a mathematical algorithm rather than reciting a **practical application** of the algorithm

which produces a useful, concrete and tangible result, then it would be non-statutory. In order for claims to be statutory, claims must include a practical application with a concrete, useful, and tangible result. However, claims 1-14 merely disclose elements for performing mathematical function without disclosing a **practical application with a concrete, useful, and tangible result, as they are pre-emptive in any application**. It is noted that final step is merely “store” the “final result”. The result produced by claimed invention is merely number. It does not have a real world value since the claimed invention is not for any practical application, and thus is not useful. Therefore, claims 1-14 are directed to non-statutory subject matter.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the

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examiner should be directed to Tan V. Mai whose telephone number is (571) 272-3726.

The examiner can normally be reached on Mon-Wed from 9:30am to 2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis Bullock, can be reached on (571) 272-3759. The fax phone number for the organization where this application or proceeding is assigned is:

Official (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

/Tan V Mai/  
Primary Examiner, Art Unit 2193